



PTO/SB/33 (07-05)

United States Patent &amp; Trademark Office; U.S. DEPARTMENT OF COMMERCE

<b>PRE-APPEAL BRIEF REQUEST FOR REVIEW</b>	Docket Number (Optional) 58268.09059 (formerly 108339-09059)
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]  on _____  Signature _____  Typed or printed Name _____	Application Number:  09/714,273  Filed: November 17, 2000
	First Named Inventor:  Govind MALALUR
	Art Unit: 2164
	Examiner: Al Hashemi, Sana A.

**Mail Stop AF**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

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Applicant/Inventor.

☐

assignee of record of the entire interest.

See 37 CFR 3.71. Statement under  
37 CFR 3.73(b) is enclosed


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Attorney or agent of record.

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Attorney or agent acting under 37 CFR 1.34.

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January 22, 2007

Date

NOTE: Signatures of all of the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

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\*Total of \_\_\_\_\_ forms are submitted.



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Govind MALALUR

Art Unit: 2164

Application No.: 09/714,273

Examiner: Al Hashemi, Sana A.

Filed: November 17, 2000

Attorney Dkt. No.: 58268.09059  
(formerly 108339-09059)

For: TABLE LOOKUP MECHANISM FOR ADDRESS RESOLUTION

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

January 22, 2007

Sir:

In accordance with the Pre-Appeal Brief Conference Pilot Program guidelines set forth in the July 12, 2005 Official Gazette Notice, Applicant hereby submits this Pre-Appeal Brief Request for Review of the final rejections of claims 1-15 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,829,217 of Bechtolsheim et al. ("Bechtolsheim") in the above identified application. Claims 1-15 were finally rejected in the Office Action dated October 20, 2006 ("the Office Action"). Applicant filed a Response to the Final Office Action on November 14, 2006, and the Office issued an Advisory Action dated December 7, 2006 maintaining the final rejections of claims 1-15. Applicant hereby appeals these rejections and submits this Pre-Appeal Brief Request for Review.

Applicants respectfully submit that rejection includes clear error with regard to the teachings of the cited reference, Bechtolsheim. Specifically, the rejection is in clear error by viewing Bechtolsheim as disclosing parsing said data packet into an index portion and a corresponding bucket portion, the rejection is in clear error by viewing Bechtolsheim as disclosing indexing, directly, said index portion to said corresponding bucket portion and the rejection is in clear error by viewing Bechtolsheim as disclosing an access of a address table information stored in an address look-up table using said bucket portion.

Bechtolsheim generally describes a per-flow dynamic buffer management scheme for a data communications device. Through per-flow dynamic buffer limiting, header information for each packet is mapped into an entry in a flow table, with a separate flow table provided for each output queue. Each flow table entry maintains a buffer count for the packets currently in the queue for each flow. On each packet enqueueing action, a dynamic buffer limit is computed for the flow and compared against the buffer count already used by the flow to make a mark, drop, or enqueue decision. A packet in a flow is dropped or marked if the buffer count is above the limit. Otherwise, the packet is enqueued and the buffer count incremented by the amount used by the newly-enqueued packet. The scheme operates independently of packet data rate and flow behavior, providing means for rapidly discriminating well-behaved flows from non-well-behaved flows in order to manage buffer allocation accordingly.

Bechtolsheim aims to identify well-behaved, robust flows from non-adaptive “aggressive” flows (NAFs) and to provide fair queuing and efficient router/switch resource utilization for all flows (column 5, lines 4-12). In contrast, the present application is directed to a method and apparatus for a table lookup index that provides access to a table, such as an addressing table, in a fast and efficient manner (paragraph [0007] of the Specification present application).

**I. Clear Error: Bechtolsheim does not disclose parsing said data packet into an index portion and a corresponding bucket portion.**

Bechtolsheim does not disclose any particular method, device, or switch for parsing said data packet into an index portion and a corresponding bucket portion as recited in claims 1, 8, and 15. The Office Action took the position that column 5, lines 30-37 of Bechtolsheim discloses this feature of the claims. Applicant respectfully submits that the Office Action’s understanding of column 5, lines 30-37 of Bechtolsheim is clear error, because Bechtolsheim’s description is limited to parsing from the packet header the packet size, source address, destination address, and type of service (TOS). For an IP packet, Bechtolsheim indicates that the UDP source and destination port or the MAC source and destination and protocol type (for Ethernet packets) may be extracted to identify the necessary TOS. Bechtolsheim does not teach or suggest that an index portion and a corresponding bucket portion may be extracted from the

data packet. Bechtolsheim specifically refers to parsing the packet header, but there is no teaching or suggestion in column 5 or in any other portion of Bechtolsheim of parsing the data packet into the index portion and the bucket portion.

Further, although the Office Action at best vaguely implies that Applicant's recited index and bucket portions are equivalent to the parsed portions of the packet header in Bechtolsheim, Applicant submits that this vague association presented by the Office Action, without any specific citation to the reference or support by the knowledge available to one of ordinary skill in the art, is insufficient to properly support a rejection of claims 1-15. The index and bucket portions are expressly recited in the claims and are clearly defined in the Specification, and therefore, an anticipatory reference under 35 USC §102 must teach or disclose the exact limitation, i.e., and index and bucket portion. A broad assertion that a header, address, or other parameter that is parsed from a packet is equivalent to the recited index and bucket portion is not sufficient to properly support a rejection under 35 USC §102. Thus, Applicant submits that Bechtolsheim fails to teach or disclose each and every element recited in the rejected claims. Reversal of the rejection is respectfully requested.

**II. Clear Error: Bechtolsheim does not disclose indexing, directly, said index portion to said corresponding bucket portion.**

Bechtolsheim does not disclose any particular method, device, or switch for indexing, directly, said index portion to said corresponding bucket portion as recited in claims 1, 8, and 15. The Office Action took the position that column 6, lines 28-36 and 37-50 of Bechtolsheim discloses this feature of the claims. Applicant respectfully submits that the Office Action's understanding of column 6, lines 28-36 and 37-50 of Bechtolsheim is clear error, because Bechtolsheim's description is limited to outputting an index to flow table for a designated output queue for a given input flow. Bechtolsheim generally refers to computing a table lookup index based on a limited range of inputs (e.g., source address and destination address) as a generic hash function novel because of the choice of both input parameters and precise hash function. However, contrary to the Office Action's contentions, nothing in Bechtolsheim provides to index, directly, said index portion to said corresponding bucket portion as recited in claims 1, 8, and 15. Bechtolsheim focuses on hashing the flow identifying information contained in the packet header to reduce huge range of packet header values into a single compact field.

Bechtolsheim is devoid of any teaching or suggestion of the indexing, directly, of said index portion to said corresponding bucket portion as recited in claims 1, 8, and 15.

According to the USPTO's Advisory Action issued December 7, 2006, the Examiner apparently took the position that the Specification does not offer support for the indexing recitations of claims 1, 8, and 15. Applicants respectfully point out that the Specification does offer support for the claimed features. Paragraph [0043] of the instant Specification recites "FIG. 2B is an illustration of an index segment I(1) linearly indexed to a bucket segment N(1), an index segment I(2) linearly indexed to a bucket segment N(2), an index segment I(3) linearly indexed to a bucket segment N(3) . . . Each index segment I selects a bucket segment N and the combination of index segment I and bucket segment N selects an entry in the table." The process of indexing of parsed portions is also further discussed in later sections of the Specification (e.g., paragraphs [0044] through [0047]). Thus, contrary to the contentions made in the Advisory Action, the Specification does provide support for the indexing recitations.

Even if Applicant were to assume that the flow identifying information of Bechtolsheim corresponds to one of Applicant's index portion or bucket portions, the description of column 6, lines 28-36 and lines 37-50, Bechtolsheim does not anticipate Applicant's recited limitation of directly indexing an index portion into a bucket portion that was parsed from the same packet, as the flow information is 1) not taught as being parsed from the packet, and 2) a first parsed portion is not in any way taught as being directly indexed into a corresponding second portion of the packet that was also parsed from the packet. Thus, Applicant submits that Bechtolsheim fails to teach or disclose each and every element recited in the rejected claims. Reversal of the rejection is respectfully requested.

**III. Clear Error: Bechtolsheim does not disclose accessing address table information stored in an address look-up table using said bucket portion.**

Bechtolsheim does not disclose any particular method, device, or switch for accessing address table information stored in an address look-up table using said bucket portion as recited in claims 1, 8, and 15. The Office Action took the position that column 11, lines 55-60 of Bechtolsheim discloses this feature of the claims. Applicant respectfully submits that the Office Action's understanding of column 11, lines 55-60 of Bechtolsheim is clear error, because Bechtolsheim's description is limited to avoiding incorrect flow entry access by storing a short

generation number in a transmit queue associated with the packet indicating a version of the mapping used by this packet and this version of the mapping is then queued on transmit to regenerate the same index.

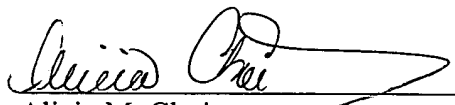
However, Bechtolsheim does not teach or suggest that the same index is regenerated using a bucket portion. Instead, Bechtolsheim simply describes storing a generation number indicative of a version of mapping and using this version to regenerate the same index.

In view of the foregoing, Bechtolsheim fails to teach or suggest all of the recitations of independent claims 1, 8, and 15.

Bechtolsheim is wholly silent about the parsing, the indexing, and the accessing of the address table information as recited in independent claims 1, 18, and 35. As such, Applicants submit that Bechtolsheim fails to teach or disclose each and every element recited in independent claims 1, 18, and 35.

Reversal of the pending rejections, in view of the clear errors in the Office Action, is respectfully requested together with timely allowance of the pending claims. In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

  
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